WHAT IS CLAIMED IS:

1. A device for constructing a wire wrapped screen, the device comprising:

a screen body carrier adapted to carry an elongate screen body being rotated substantially about a screen body longitudinal axis;

a wrap wire feed adapted to guide a wrap wire being wound about the screen body, the screen body carrier and wrap wire feed cooperate to move at least one of the screen body and wrap wire relative to the other and substantially parallel to the screen body longitudinal axis to wrap the wrap wire substantially helically about the screen body as the screen body rotates;

a gauge measurement device adapted to measure a dimension between adjacent wraps of the wrap wire on the screen body; and

a controller coupled to the gauge measurement device and adapted to adjust the wrapping of the wrap wire about the screen body to affect the dimension between adjacent wraps of wire on the screen body in relation to the measured dimension between adjacent wraps of the wrap wire on the screen body.

2. The device of claim 1 further comprising:

a wrap wire measurement device adapted to measure a dimension of the wrap wire; and

wherein the controller is coupled to the wrap wire measurement device and adapted to adjust the wrapping of the wrap wire about the screen body in relation to the measured dimension of the wrap wire.

3. The device of claim 2 wherein the measured dimension comprises a width of the wrap wire.

4. The device of claim 1 wherein the controller is adapted to adjust at least one of a rotational rate of the screen body and a rate of movement between the screen body and the wrap wire substantially parallel to the screen body longitudinal axis to affect a distance between adjacent wraps of wrap wire on the screen body.

5. The device of claim 4 wherein the controller is adapted to at least one of decrease the rate of movement and increase the rotational rate if the measured dimension between adjacent wraps of the wrap wire on the screen body increases.

6. The device of claim 4 wherein the controller is adapted to maintain the rate of movement and the rotational rate if a variation in the dimension between adjacent wraps of the wrap wire on the screen body is less than a specified tolerance.

7. The device of claim 2 wherein the controller is adapted to adjust at least one of a rotational rate of the screen body and a rate of movement between the screen body and the wrap wire substantially parallel to the screen body longitudinal axis to affect a distance between adjacent wraps of wrap wire on the screen body; and

wherein the measured dimension comprises a width of the wrap wire and the controller is adapted to at least one of increase the rate of movement and decrease the rotational rate if the width of the wrap wire increases.

8. The device of claim 2 wherein the controller is adapted to adjust at least one of a rotational rate of the screen body and a rate of movement between the screen body and the wrap wire substantially parallel to the screen body longitudinal axis to affect a distance between adjacent wraps of wrap wire on the screen body; and

wherein the controller is adapted to maintain the rate of movement and the rotational rate if a variation in the measured dimension of the wrap wire is less than a specified tolerance.

9. The device of claim 1 wherein the controller is adapted to log measurements of the dimension between adjacent wrap wires.

10. The device of claim 2 wherein the controller is adapted to log measurements of the wrap wire dimension.

11. The device of claim 1 wherein the screen body comprises at least one of a plurality of elongate wires extending along the screen body longitudinal axis, a tubular body extending along the screen body longitudinal axis and having one or more apertures through a wall of the tubular body, and a wire wrapped screen extending along the screen

body longitudinal axis and having a plurality of elongate wires affixed axially to an exterior of the wire wrapped screen.

12. The device of claim 1 further comprising:

a compression member adapted to abut the wrap wire and compress the wrap wire to the screen body;

a compression member actuator adapted to affect a load applied by the compression member in compressing the wrap wire to the screen body; and

wherein the controller is coupled to the compression member actuator and adapted to adjust the load applied in compressing the wrap wire to the screen body.

13. The device of claim 12 wherein the compression member actuator is at least one of a pneumatic cylinder and a hydraulic cylinder, and wherein the controller is adapted to adjust a pressure supplied to the cylinder.

14. The device of claim 12 wherein a current is applied across the wrap wire and screen body and wherein the controller is adapted to adjust the load applied in compressing the wrap wire to the screen body so that the current welds the wrap wire to the screen body.

15. The device of claim 1 further comprising:

a power source adapted to apply a current across the wrap wire and the screen body; and

wherein the controller is coupled to the power source and adapted to adjust the current.

16. The device of claim 1 wherein a screen length is specified to the controller and wherein the controller ceases movement between the screen body and wrap wire substantially parallel to the screen body longitudinal axis in relation to the specified screen length.

17. The device of claim 1 wherein the gauge measurement device measures the dimension between adjacent wraps of wrap wire on the screen body at least one of periodically and continuously during an interval while wrapping the wrap wire about the screen body.

18. The device of claim 2 wherein the wrap wire measurement device measures the dimension of the wrap wire at least one of periodically and continuously during an interval while wrapping the wrap wire about the screen body.

19. The device of claim 1 further comprising a marking device coupled to the controller; and wherein the controller is adapted to actuate the marking device to mark the wire wrapped screen.

20. The device of claim 20 wherein the controller is adapted to actuate the marking device if a variation in the measured dimension between adjacent wraps of the wrap wire on the screen body exceeds a specified tolerance.

21. The device of claim 21 wherein the controller is adapted to actuate the marking device so that a location of the mark substantially coincides with a location of the variation on the wire wrapped screen.

22. The device of claim 20 wherein the controller is adapted to actuate the marking device to mark the wire wrapped screen with different marks in relation to the measured dimension between adjacent wraps of the wrap wire on the screen body.

23. The device of claim 1 wherein the gauge measurement device is an optical measurement device.

24. The device of claim 1 wherein the gauge measurement device comprises a video imager.

25. The device of claim1 wherein the controller is adapted to adjust the wrapping of the wrap wire about the screen body while the wrap wire is being wrapped about the screen body.

26. A screen fabricating device comprising:

a screen body carrier adapted to carry an elongate screen body being rotated substantially about a screen body longitudinal axis;

a wrap wire feed adapted to guide a wrap wire being wound about the screen body, the screen body carrier and wrap wire feed cooperate to move at least one of the screen body and wrap wire relative to the other and substantially parallel to the screen body longitudinal axis to wrap the wrap wire substantially helically about the screen body as the screen body rotates;

a wrap wire measurement device adapted to measure a dimension of the wrap wire; and

a controller coupled to the wrap wire measurement device and adapted to adjust the wrapping of the wrap wire about the screen body to affect the dimension between adjacent wraps of wire on the screen body in relation to the measured dimension of the wrap wire.

27. The screen fabricating device of claim 26 wherein the measured dimension is a width of the wrap wire.

28. The screen fabricating device of claim 26 wherein the controller is adapted to adjust at least one of a rotational rate of the screen body and a rate of movement between the screen body and the wrap wire substantially parallel to the screen body longitudinal axis to affect a distance between adjacent wraps of wire on the screen body.

29. The screen fabricating device of claim 28 wherein the controller is adapted to at least one of increase the rate of movement and decrease the rotational rate if the wrap wire dimension increases.

30. The screen fabricating device of claim 28 wherein the controller is adapted to maintain the rate of movement and rotational rate if a variance in the wrap wire dimension is less than a specified tolerance.

31. The screen fabricating device of claim 26 wherein the controller is adapted to log measurements of the wrap wire dimension.

32. The screen fabricating device of claim 26 wherein the screen body comprises a plurality of elongate wires spaced about the screen body longitudinal axis.

33. The screen fabricating device of claim 26 further comprising:

a compression member adapted to abut the wrap wire and compress the wrap wire to the screen body;

a compression member actuator adapted to affect a load applied by the compression member in compressing the wrap wire to the screen body; and

wherein the controller is coupled to the compression member actuator and adapted to adjust the load applied in compressing the wrap wire to the screen body.

34. The screen fabricating device of claim 26 further comprising:

a power source adapted to apply a current across the wrap wire and the screen body; and

wherein the controller is coupled to the power source and adapted to adjust the current.

35. The screen fabricating device of claim 26 wherein the wrap wire measurement device is adapted to measure the dimension of the wrap wire continuously while wrapping the wrap wire about the screen body.

36. The screen fabricating device of claim 26 further comprising a marking device coupled to the controller; and

wherein the controller is adapted to actuate the marking device to mark the wire wrapped screen.

37. The screen fabricating device of claim 36 wherein the controller is adapted to actuate the marking device if a variation in the measured dimension of the wrap wire exceeds a specified tolerance.

38. The screen fabricating device of claim 37 wherein the controller is adapted to actuate the marking device so that a location of the mark substantially coincides with a location of the variation on the wire wrapped screen.

39. The screen fabricating device of claim 36 wherein the controller is adapted to actuate the marking device to mark the wire wrapped screen with different marks in relation to the dimension of the wrap wire.

40. The screen fabricating device of claim 26 wherein the wrap wire measurement device is an optical measurement device.

41. The screen fabricating device of claim 26 wherein the wrap wire measurement device comprises a video imager.

42. The screen fabricating device of claim 26 wherein the controller is adapted to adjust the wrapping of the wrap wire about the screen body while the wrap wire is being wrapped about the screen body.

43. A method of constructing a screen comprising:

wrapping a wire substantially helically about a screen body as the screen body rotates and at least one of the wire and screen body is translated substantially parallel to a screen body longitudinal axis;

measuring a dimension between adjacent wraps of the wire on the screen body continuously during one or more intervals while wrapping the wire about the screen body; and

adjusting the wrapping of the wire about the screen body to affect the dimension between adjacent wraps of wire on the screen body in relation to the measured dimension between adjacent wraps of the wire on the screen body.

44. The method of claim 43 further comprising:

measuring a dimension of the wire while wrapping the wire about the screen body; and

adjusting the wrapping of the wire about the screen body to affect the dimension between adjacent wraps of wire on the screen body in relation to the measured dimension of the wire.

45. The method of claim 44 wherein measuring a dimension of the wire comprises measuring a width of the wire.

46. The method of claim 43 wherein adjusting the wrapping of the wire about the screen body comprises adjusting at least one of a rate of movement between the screen body and wire substantially parallel to the screen body longitudinal axis and a rotational rate of the screen body about the screen body longitudinal axis.

47. The method of claim 46 wherein adjusting the wrapping of the wire about the screen body comprises at least one of increasing the rate of movement and decreasing the rotational rate if the dimension between adjacent wraps of the wire decreases.

48. The method of claim 46 wherein adjusting the wrapping of the wire about the screen body comprises maintaining the rate of movement and rotational rate substantially

constant if a variation in the dimension between adjacent wraps of the wire is less than a specified tolerance.

49. The method of claim 44 wherein adjusting the wrapping of the wire about the screen body comprises at least one of increasing a rate of movement between the screen body and wire substantially parallel to the screen body longitudinal axis and decreasing a rotational rate of the screen body about the screen body longitudinal axis if the width of the wire increases.

50. The method of claim 44 wherein adjusting the wrapping of the wire about the screen body comprises maintaining a rate of movement between the screen body and wire substantially parallel to the screen body longitudinal axis and a rotational rate of the screen body about the screen body longitudinal axis substantially constant if a variation in the measured dimension of the wire is less than a specified tolerance.

51. The method of claim 43 further comprising logging measurements of the dimension between adjacent wraps of the wire.

52. The method of claim 44 further comprising logging measurements of the measured dimension of the wire.

53. The method of claim 43 wherein adjusting the wrapping of the wire about the screen body comprises adjusting the wrapping of the wire about the screen body while wrapping the wire about the screen body.

54. The method of claim 43 further comprising marking the screen while wrapping the wire about the screen body to indicate a variance in the measured dimension between adjacent wraps of the wire.

55. The method of claim 54 further comprising marking the screen so that a location of the mark substantially coincides with a location of the variance on the screen.

56. The method of claim 43 comprising measuring a dimension between adjacent wraps with an optical measurement device.

57. A method of constructing a screen comprising:

wrapping a wire substantially helically about a screen body as the screen body rotates and at least one of the wire and screen body is translated substantially parallel to a screen body longitudinal axis;

measuring a dimension of the wire continuously during one or more intervals while wrapping the wire about the screen body; and

adjusting the wrapping of the wire about the screen body to affect the dimension between adjacent wraps of wire on the screen body in relation to the measured dimension of the wire.

58. The method of claim 57 wherein the measured the dimension of the wire comprises measuring a width of the wire.

59. The method of claim 57 wherein adjusting the wrapping of the wire about the screen body comprises adjusting at least one of a rate of movement between the screen body and wire substantially parallel to the screen body longitudinal axis and a rotational rate of the screen body about the screen body longitudinal axis.

60. The method of claim 59 wherein adjusting the wrapping of the wire about the screen body comprises at least one of increasing the rate of movement and decreasing the rotational rate if the dimension of the wire increases.

61. The method of claim 59 wherein adjusting the wrapping of the wire about the screen body comprises maintaining the rate substantially constant if a variation in the measured dimension of the wire is less than a specified tolerance.

62. The method of claim 57 further comprising logging measurements of the measured dimension of the wire.

63. The method of claim 57 further comprising marking the screen during the wrapping of the wire about the screen body to indicate a variance in the dimension of the wire.

64. The method of claim 57 further comprising marking the screen so that a location of the mark substantially coincides with a location of the variance on the screen.

65. The method of claim 57 comprising measuring a dimension of the wire with an optical measurement device.

66. A device for constructing a wire wrapped screen, comprising:

a screen body carrier adapted to carry an elongate screen body;

a wrap wire feed adapted to guide a wrap wire being wound substantially helically about the screen body;

a measurement device adapted to measure at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire;

a marking device actuable to mark the wire wrapped screen; and

a controller coupled to the measurement device and the marking device, the controller adapted to actuate the marking device in relation to a measured dimension from the measurement device.

67. The device of claim 66 wherein the controller is adapted to actuate the marking device when a variance in the measured dimension exceeds at least one of a high tolerance and a low tolerance.

68. The device of claim 66 wherein the controller is adapted to actuate the marking device so that a location of the mark substantially coincides with a location of a variance of the measured dimension on the wire wrapped screen.

69. The device of claim 66 wherein the controller is adapted to actuate the marking device to mark the wire wrapped screen with different marks in relation to the measured dimension.

70. The device of claim 69 wherein the different marks differ in at least one of color, size, and shape.

71. The device of claim 66 wherein the controller is adapted to actuate the marking device with a mark having at least two distinguishable characteristics, wherein a first characteristic is indicative of what measured dimension the mark corresponds to and a second characteristic is indicative of a magnitude of the measured dimension.

72. The device of claim 66 wherein the mark comprises text.

73. The device of claim 66 wherein the controller is adapted to actuate the marking device while winding the wrap wire about the screen body.

74. The device of claim 66 wherein the controller is adapted to adjust the winding of the wrap wire about the screen body to affect the dimension between adjacent wraps of wire about the screen body in relation to the measured dimension.

75. The device of claim 66 wherein the gauge measurement device is an optical measurement device.

76. The device of claim 66 wherein the gauge measurement device comprises a video imager.

77. A method of constructing a screen, comprising:

wrapping a wire substantially helically about a screen body;

measuring at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire; and

marking the screen while wrapping the wire about the screen body in relation to the measured dimension.

78. The method of claim 77 comprising marking the screen when a variance in the measured dimension exceeds a specified tolerance.

79. The method of claim 77 comprising marking the screen with a mark that substantially coincides in location with a location of a variance in the measured dimension on the screen.

80. The method of claim 77 comprising marking the screen with different marks in relation to the measured dimension.

81. The method of claim 77 comprising marking the screen with a mark having at least two distinguishable characteristics, wherein a first characteristic is indicative of what measured dimension the mark corresponds to and a second characteristic is indicative of a magnitude of the measured dimension.

82. The method of claim 81 wherein the first characteristic is a shape of the mark and the second characteristic is a color of the mark.

83. The method of claim 77 comprising marking the screen with text.

84. The method of claim 77 comprising adjusting the wrapping of the wrap wire about the screen body to affect the dimension between adjacent wraps of wire about the screen body in relation to the measured dimension.

85. The method of claim 77 comprising measuring at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire with an optical measurement device.

86. The method of claim 77 comprising logging the measured dimension.

87. A device for constructing a wire wrapped screen, comprising:

a screen body carrier adapted to carry an elongate screen body;

a wrap wire feed adapted to guide a wrap wire being wound substantially helically about the screen body; and

at least one measurement device adapted to measure at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire while the wrap wire is being wrapped about the screen body.

88. The device of claim 87 further comprising a memory coupled to the measurement device, the memory adapted to receive and store measurement data from the measurement device.

89. The device of claim 88 wherein the measurement data is correlated to a length of the wire wrapped screen.

90. The device of claim 87 further comprising a controller coupled to the measurement device adapted to adjust the wrapping of the wrap wire about the screen body to affect the dimension between adjacent wraps of wire on the screen body in relation to the measured dimension.

91. The device of claim 87 further comprising a marking device adapted to mark the screen in relation to the measured dimension.

92. The device of claim 87 wherein the dimension of the wrap wire comprises a width of the wrap wire.

93. The device of claim 87 wherein the measurement device comprises an optical measurement device.

94. The device of claim 93 wherein the measurement device comprises a video imager.

95. A method of constructing a screen, comprising:

wrapping a wire substantially helically about a screen body; and

measuring at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire while the wire is being wrapped substantially helically about the screen body.

96. The method of claim 95 wherein wrapping the wire substantially helically about the screen body comprises rotating the screen body about a screen body longitudinal axis as the wire is being wrapped substantially helically about the screen body; and

wherein measuring at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire comprises measuring while the screen body is rotating.

97. The method of claim 95 further comprising logging measurement data.

98. The method of claim 96 further comprising correlating the measurement data to a length of the screen.

99. The method of claim 95 further comprising adjusting the wrapping of the wire about the screen body to affect the dimension between adjacent wraps of wire about the screen body in relation to a measurement of at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire.

100. The method of claim 95 further comprising marking the screen in relation to a measurement at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire.

101. The method of claim 95 wherein the dimension of the wrap wire comprises a width of the wrap wire.

102. The method of claim 95 wherein measuring at least one of a dimension between adjacent wraps of wire about the screen body and a dimension of the wrap wire is measuring with an optical measurement device.